

GAATCCCCCAACAGAGCCAGCTCTCCATCTAGTGGACAGGGAAGCTAGCAGCAAAACC 39 (UPPER: SEQ ID NO.: 1)
TTCCCTTCACTACAAAACCTTCATTGCTTGGCCAAAAGAGAGTTAATTCAATGTAGACAT 19 (LOWER: SEQ ID NO.: 4)
CTATGTAGGCAATTAAAAACCTATTGATGTATAAAACAGTTTGCATTTCATGGAGGGCAAC 119
TAAATACATTCTAGGACTTTATAAAAGATCACTTTTATTATGACAGGGTGGAAACAAG 39
ATGGATTATCAAGTGTCAGTCCAATCTATGACATCAATTATTATACATCGGAGCCCTGC 179
M D Y Q V S S P I Y D I N Y Y T S E P C 59
239
79
299
99

FIG. 1A-1

CAAAAATCAATGTGAAGCAAAATCGAGCCCGCCTCCTGCTCCGCTCTACTCACTGGTG	359
Q K I N V K Q I A A R L L P P L Y S L V	119
TTCAATCTTTGGTTTGTGGCAACATGCTGGTCATCCTCATCCTGATAAACTGCAAAAGG	419
F I F G F V G N M L V I L I L I N C K R	139
CTGAAGAGCATGACTGACATCTACCTGCTCAACCTGGCCATCTCTGACCTGTTTTTCCTT	479
L K S M T D I Y L L N L A I S D L F F L	159
CTTACTGTCCCCTTCTGGGCTCACTAIGCTGCCGCCAGTGGGACTTTGGAAATACAATG	539
L T V P F W A H Y A A A Q W D F G N T M	179
TGTCAACTCTTGACAGGGCTCTATTTTATAGGCTTCTCTCGGAATCTTCTTCATCATC	599
C Q L L T G L Y F I G F F S G I F F I I	199
CTCCTGACAAATCGATAGGTACCTGGCTGCTCGTCCATGCTGTGTTTGCTTTAAAGCCAGG	659
L L T I D R Y L A V V H A V F A L K A R	219
ACGGTCACCTTTGGGGTGGTGACAAGTGTGATCACTTGGGTGGTGGCTGTGTTTGGCTCT	719
T V T F G V V T S V I T W V V A V F A S	239
CTCCAGGAATCATCTTTACCAGATCTCAAAAAGAAGTCTTCATTACACCTGCAGCTCT	779
L P G I I F T R S Q K E G L H Y T C S S	259

CATTTTCCATACA
H F P Y

FIG. 1A-2

59 (UPPER: SEQ ID NO.: 2)
19 (LOWER: SEQ ID NO.: 5)

GAATTCCTCCCAACAGAGCCCAAGCTCTCCATCTAGTGGACAGGGAAGCTAGCAGCAACC

TTCCCTTCACTACAAAACCTTCATTGCTTGGCCAAAAGAGAGTTAATTCAATGTAGACAT 119
39

CTATGTAGGCAATTAAAAACCTATTGATGTATAAAACAGTTTGCAATTCATGGAGGGCAAC 179
59

TAAATACATTCTAGGACTTTATAAAAGATCACCTTTTATTATGCACAGGGTGAACAAG 239
79

ATGGATTATCAAGTGCAAGTCCAATCTATGACATCAATTATTATACATCGGAGCCCTGC 299
M D Y Q V S S P I Y D I N Y Y T S E P C 99

FIG. 1B-1

CAAAAATCAATGTGAAGCAAATCGCAGCCCGCTCCTGCCTCCGCTCTACTCACTGGTG	359
Q K I N V K Q I A A R L L P P L Y S L V	119
TTCACTTTGGTTTGTGGGCAACATGCTGGTCATCCTCATGATAAACTGCAAAAGG	419
F I F G F V G N M L V I L I L I N C K R	139
CTGAAGAGCATGACTGACATCTACCTGCTCAACCTGGCCATCTCTGACCTGTTTTCCTT	479
L K S M T D I Y L L N L A I S D L F F L	159
CTTACTGTCCCTTCTGGGCTCACTATGCTGCGGCCAGTGGGACTTTGGAAATACAATG	539
L T V P F W A H Y A A A Q W D F G N T M	179
TGTCAACTCTTGACAGGGCTCTATTTATAGGCTTCTCTCTGGAATCTTCTTCATCATC	599
C Q L L T G L Y F I G F F S G I F F I I	199
CTCCTGACAATCGATAGGTACCTGGCTGTGTCATGCTGTGTTTGCTTTAAAGCCAGG	659
L L T I D R Y L A V V H A V F A L K A R	219
ACGGTCACCTTTGGGGTGGTGACAAGTGTGATCACTTGGTGGTGGCTGTGTTGCGTCT	719
T V T F G V V T S V I T W V V A V F A S	239
CTCCCAGGAATCATCTTTACCAGATCTCAAAAAGAAGTCTTCATTACACCTGCAGCTCT	779
L P G I I F T R S Q K E G L H Y T C S S	259
CATTTTCCATACAGTCAGTATCAATTCTGGAAGAATTTCAGACATTAAAGATAGTCATC	839
H F P Y S Q Y Q F W K N F Q T L K I V I	279

FIG. 1B-2

TTGGGGCTGGTCCGCTGCTGTGTCATGGTCATCTGCTACTCGGGAATCCTAAAACT	899
L G L V L P L L V M V I C Y S G I L K T	299
CTGCTTCGGTGTGGAATGAGAAGAGAGGCACAGGGCTGTGAGGCTTATCTTCACCATC	959
L L R C R N E K K R H R A V R L I F T I	319
ATGATTGTTTATTTCTCTCTGGGCTCCCTACAACATTGTCCTTCCTGACACCTTC	1019
M I V Y F L F W A P Y N I V L L L N T F	339
CAGGAATTCCTTGGCCCTGAATAATTGCAGTAGCTCTAACAGGTTGGACCAAGCTATGCAG	1079
Q E F F G L N N C S S S N R L D Q A M Q	359
GTGACAGAGACTCTTGGGATGACGCACCTGCTGCATCAACCCCATCATCTATGCCTTTGTC	1139
V T E T L G M T H C C I N P I I Y A F V	379
GGGAGAAGTTCAGAAACTACCTCTTAGTCTTCTTCCAAAAGCACATTGCCAAACGCTTC	1199
G E K F R N Y L L V F F Q K H I A K R F	399
TGCAAATGCTGTTCTATTTCCAGCAAGAGGCTCCCGAGCGAGCAAGCTCAGTTTACACC	1259
C K C C S I F Q Q E A P E R A S S V Y T	419
CGATCCACTGGGGAGCAGGAAATATCTGTGGGCTTGTGACACGGACTCAAGTGGGCTGGT	1319
R S T G E Q E I S V G L *	439
GACCCAGTCAGAGTTGTGCACATGGCTTAGTTTTCATACACAGCCTGGGCTGGGGTNGG	1379
	459
TTGGNNGAGGTCTTTTAAAGGAAGTTACTGTATTAGAGGGTCTAAGATTTCATCCATT	1439
	479
TATTTGGCATCTGTTTAAAGTAGATTAGATCCGAATTC	

FIG. 1B-3

GAATTC	59 (UPPER: SEQ ID NO. 3)
CCCCCAACAGAGCCCAAGCTCTCCATCTAGTGGACAGGGAAGCTAGCAGCAACC	19 (LOWER: SEQ ID NO. 6)
TTCCCTTCACTACAAAACCTTCATTGCTTGGCCAAAAGAGAGTTAATTC	119
AATGTAGACAT	39
CTATGTAGGCAATTAAAAACCTATTGATGTATAAACAGTTTGCCATTCATGGAGGGCAAC	179
	59
TAAATACATTCTAGGACTTTATAAAGATCACTTTTATTATGCAAGGGTGAACAAG	239
	79
ATGGATTATCAAGTGTCAAGTCCCAATCTATGACATCAATTATTATACATCGGAGCCCTGC	299
M D Y Q V S S P I Y D I N Y Y T S E P C	99

FIG. 1D-1

CAAAAATCAATGTGAAGCAAAATCGCAGCCCGCCTCCTGCCTCCGCTCTACTCACTGGTG	359
Q K I N V K Q I A A R L L P P L Y S L V	119
TTCAATCTTTGGTTTGTGGCAACATGCTGGTCATCCTCATCCTGATAAACTGCAAAAGG	419
F I F G F V G N M L V I L I L I N C K R	139
CTGAAGAGCATGACTGACATCTACCTGCTCAACCTGGCCATCTCTGACCTGTTTTTCCTT	479
L K S M T D I Y L L N L A I S D L F F L	159
CTTACTGTCCCTTCTGGGCTCACTATGCTGCCGCCAGTGGGACTTTGGAATAACAATG	539
L T V P F W A H Y A A A Q W D F G N T M	179
TGTCAACTCTTGACAGGGCTCTATTTATAGGCTTCTTCTCGGAATCTTCTTCATCATC	599
C Q L L T G L Y F I G F F S G I F I I	199
CTCCTGACAATCGATAGGTACCTGGCTGTCTCGTCCATGCTGTGTTTGCTTTAAAGCCAGG	659
L L T I D R Y L A V V H A V F A L K A R	219
ACGGTCACCTTTGGGGTGGTGACAAGTGTGATCACTTGGGTGGTGGCTGTGTTGCGTCT	719
T V T F G V V T S V I T W V V A V F A S	239
CTCCAGGAATCATCTTTACCAGATCTCAAAAAGAGGTCTTCAATACACCTGCAGCTCT	779
L P G I I F T R S Q K E G L H Y T C S S	259
CATTTCCATACATTAAAGATAGTCATCTTGGGGCTGGTCCCTGCCGCTGCTTGTGTCATGGT	839
H F P Y I K D S H L G A G P A A A C H G	279

FIG. 1D-2

CATCTGCTACTCGGGAATCCTAAAACTCTGCTTCGGTGTGAAATGAGAAAGAGGCA	899
H L L L G N P K N S A S V S K *	299
CAGGGCTGTGAGGCTTATCTTCACCATCATGATTGTTTATTTCCTTCCTGGGCTCCCTA	959
	319
CAACATTGTCTCTCTGAAACACCTTCAGGAATTCTTTGGCCTGAATAATTGCAGTAG	1019
	339
CTCTAACAGGTTGGACCAAGCTATGCAGGTGACAGAGACTCTTGGGATGACGCACCTGCTG	1079
	359
CATCAACCCCATCATCTATGCTTGTCTGGGAGAAAGTTCAGAAACTACCTCTTAGTCTT	1139
	379
CTTCCAAAAGCACATTGCCAAACGCTTCTGCAAAATGCTGTTCTATTTCAGCAAGAGGC	1199
	399
TCCCCGAGCGAGCAAGCTCAGTTTACACCCGATCCACTGGGGAGCAGGAAATATCTGTGGG	1259
	419
CTTGTGACACGGACTCAAGTGGGCTGGTGACCCAGTCAGAGTTGTGCACATGGCTTAGTT	1319
	439
TTCATACACAGCCTGGGCTGGGGGTNGGTTGGNNGAGGTCTTTTAAAGGAAGTTACT	1379
	459
GTTATAGAGGGTCTAAGATTTCATCCATTTATTTTGGCATCTGTTTAAAGTAGATTAGATCC	1439
	479

GAATTC

FIG. 1D-3

I		II	
CCR5	1 MDYQVSSPQIDINYYTSEPCQKUNVKQIAARLLPPLYSLSVFIQFVGNMILVILILINCKRLKSMTDIYLLNLAIISDLIFFLIT	83	
hCC-R2b	6 MLSTSRSRFIRNTNESGEEVTTFFDYDYCAPQHKFTVKQIGACQLLPPLYSLSVFIQFVGNMILVILILINCKRLKCLFDIYLLNLAIISDLIFFLIT	95	
hCC-R3	MTTSLDITVETFGTTSYYDDVGLLQEKADTRALMAQFVPPPLYSLSVFTVGLIGNVWVWMLIKYRRIRIMTNIIYLLNLAIISDLIFFLIT	87	
hCC-R1	METPNTEDEDYDTTTEFDYGDATPCQKMERAFGAQLLPPLYSLSVFIQFVGNMILVILINCKRLKSMTDIYLLNLAIISDLIFFLIT	87	
hCC-R4	MNPTDIADTTILDESISYNNLYESIPKPTNEGKAFGELEFLPPLYSLSVFIQFVGNMILVILILINCKRLKSMTDIYLLNLAIISDLIFFLIT	92	
III		IV	
CCR5	VPFWAHYAARQMDFGNMCQLLTGLYHIGTFGFGIFFIILLTIDRYLAIVHAVFALKARTVTFGVVTSVITWVAVFASLPGIIFTRSQKEGIIH	177	
hCC-R2b	LPLWAHSAANENWFGNMCCLFTGLYHIGTFGFGIFFIILLTIDRYLAIVHAVFALKARTVTFGVVTSVITWVAVFASLPGIIFTRSQKEDSV	189	
hCC-R3	LPFWTHYVRGHNWVFGNMCCLISGFYHTGLYSEIFFIILLTIDRYLAIVHAVFALKARTVTFGVVTSVITWVAVFASLPGIIFTRSQKEGIIH	182	
hCC-R1	LPFWIDYKLDKDDWVFGDAMCKILISGFYHTGLYSEIFFIILLTIDRYLAIVHAVFALKARTVTFGVVTSVITWVAVFASLPGIIFTRSQKEGIIH	182	
hCC-R4	LPFWGYVAADQWVFGDAMCKILISGFYHTGLYSEIFFIILLTIDRYLAIVHAVFALKARTVTFGVVTSVITWVAVFASLPGIIFTRSQKEGIIH	186	

FIG. 2A

VI

CCR5
hcc-R2b
hcc-R3
hcc-R1
hcc-R4

VTCSHFPYQYQFWKXNFOTLKIVILGLVPLLVVICYSGLKTLRCRNEKRRHRAVRLFTIMIVYFLFWAPYNIVLLNTFQEFFGLNNG 272
 WCGPYFPRG...NNFHTIMRNILGLVPLLVVICYSGLKTLRCRNEKRRHRAVRVFTIMIVYFLFWTPYNIVLLNTFQEFFGLSNC 280
 TLCSALYPEDTVYSNRHHTIRMTTFQLVPLLVMAICVIGIKTLRCRPSKKIKYKARLIEVIMAVFPLFWTPYNVAILSSYQSILFGNDQ 276
 HTCSLHFPHESLREWKLFQALKLNLFGVLPLLVMIICVIGIKTLRCRPSKKIKYKARLIEVIMAVFPLFWTPYNVAILSSYQSILFGNDQ 276
 TYCKTKYSLSNST.TWKVLSSEINILGLVPLLVVICYSGLKTLRCRNEKRRHRAVRLFTIMIVYFLFWTPYNIVLLNTFQEFFGLNNG 279

VII

CCR5
hcc-R2b
hcc-R3
hcc-R1
hcc-R4

SSNRLDQAMQVTETLGMTHCCINPIIYAFVGEKFRNVLVFFQKHTAKR.FCKCCSIFQCEAFERASSVYTRSTGEQETISVGL 352
 ESTSQLDQAQVETETLGMTHCCINPIIYAFVGEKFRNVLVFFQKHTAKR.FCKCCSIFQCEAFERASSVYTRSTGEQETISVGL 360
 ERSKHLDMVMTVEVIAYSHCCNPNIIYAFVGERFRNVLVFFQKHTAKR.LCRYIPFLPSEKIERITSSV.SPSTAEPLSIVF 355
 EQSRHLDLAWQVTEVIAYTHCCNPNIIYAFVGERFRNVLVFFQKHTAKR.LVMWLPFLSVDRLEIRVSSV.SPSTGEHETISVGL 355
 TTFERYLDVATQATETLAFVHCCINPIIYAFVGEKFRNVLVFFQKHTAKR.KTCRGLFVLQYQGLIQIYSADTPSSSYTQSTMDHDLHDAL 360

FIG. 2B

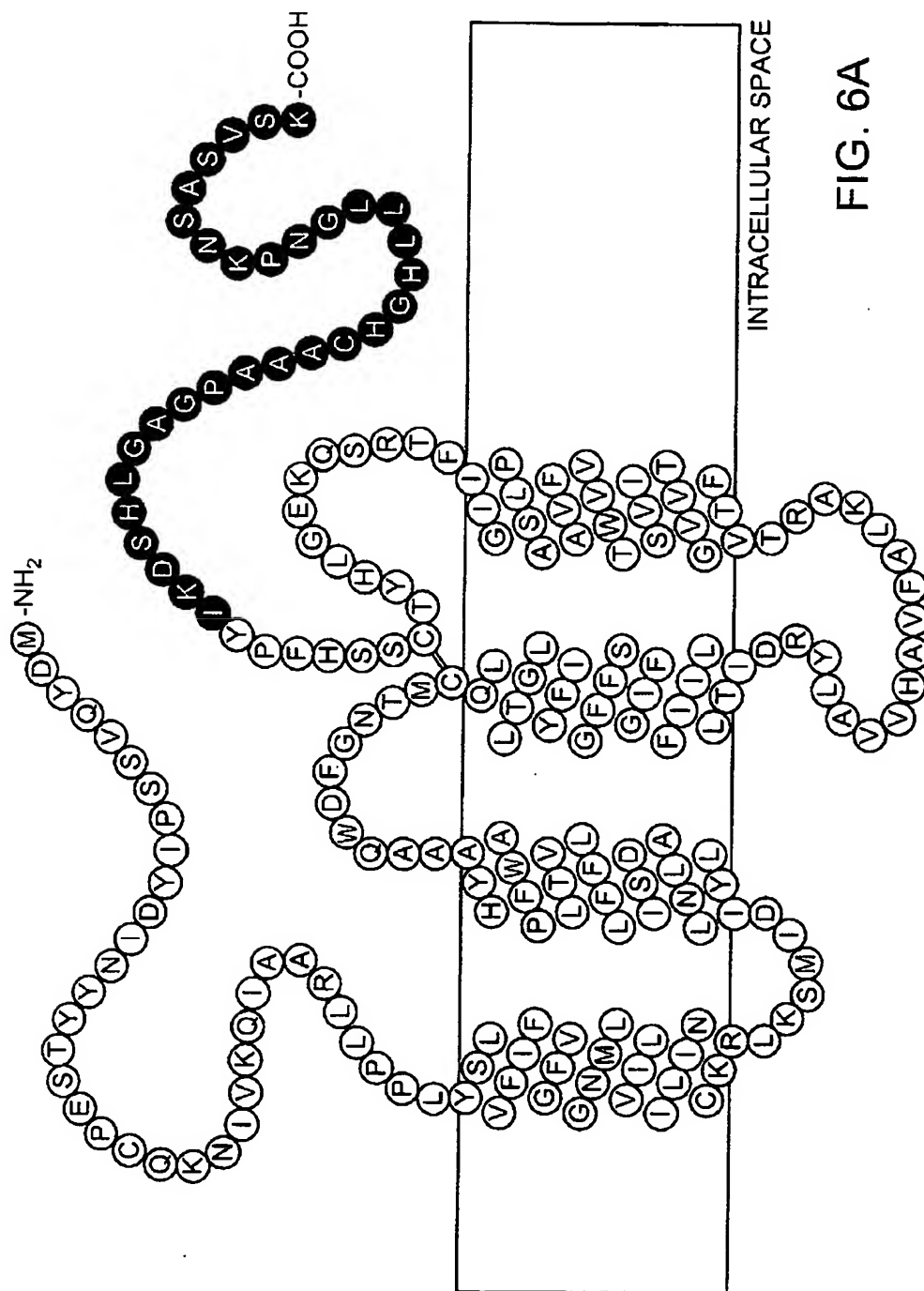


FIG. 6A

